

Duffield 2003-0207

R E M A R K S

Claims 1 and 19-30 were rejected under 35 USC 102(e) as being anticipated by Ford, US Patent 7,433,943. Applicants respectfully traverse.

In connection with the preamble of claim 1 the Examiner points to Figs. 1, 2, and 8 and states “controlling traffic within a network.” Figs. 1, 2 and 8 depicts structure, whereas the preamble of claim 1 specifies a “method for assigning packets belonging to traffic of a network to different quality of service (QoS) treatments” (emphasis supplied). Clearly, the cited Figs. do not teach a method. Rather, Fig. 1 teaches an arrangement that includes a bandwidth management device 30 that is interposed between a router 22 and network 50 on one side, and LAN 40 and devices 42 on the other side. Device 30 manages the flow of information between the two sides and, more specifically, it classifies data flows and, depending on the classification, enforces bandwidth utilization controls on the data flow, to control and/or allocates the bandwidth utilization on the link to network 50. That means that at least in connection with one class of data flows, it enforces a bandwidth utilization limit. See col. 1, lines 47-67, and particularly lines 64-67. Fig. 2 depicts the structure of device 30.

It is clear that device 30 manages the flow between LAN 40, on one side, and network 50 on the other side. It consequently impacts the traffic on LAN 40, but it does not control it. Similarly, it impacts that traffic on network 50, but it does not control it. Just as it is clear that a first device 24 can employ network 50 to communicate with another device 24 without interference from device 30, it is also clear that a first device 42 can employ LAN 40 communicate with another device 42 without interference from device 30. The only flows that are controlled by device 30 are flows that go from LAN 40 to link 21, or from link 21 to LAN 40; i.e., only flows that enter device 30.

In short, device 30 does NOT provide QoS treatment on, through, or within any network – as claim 1 specifies – but only on, through or within device 30.

Additionally, claim 1 specifies the creation of a set of rules “pursuant to a statistical analysis of traffic in the network.” In connection with this clause the Examiner points to the fact that measurement engine 140 within device 30 samples data flows, there by “measuring bandwidth utilization with respect to a plurality of utilization statistics,” citing col. 7, lines 54-59. Those utilization statistics are mentioned in col. 7, lines 65, etc

Duffield 2003-0207

seq.; that is “average rate (bps), peak rate (bps), total inbound and/or outbound bytes, and network efficiency (i.e., the number of packets/flows/bytes that are retransmitted over the total number of packets/flows/bytes).

It is not clear as to what uses these statistics are applied but it is reasonable to assume that they are applied to fulfill the goal of the arrangement which, as explained in the Summary section, is to enforce that the allotments of data transfer are not violated, within the context of fixed partition implementations, or burstable partition implementations (see col. 6, lines 63 to col. 7, line 27). It is respectfully submitted that the reference teaches no statistical analysis that is applied for creating a set of rules as specified in claim 1.

What is clear, however, that the measurements performed in device 30 are NOT of network traffic, but only of traffic through device 30.

It is respectfully submitted, therefore, that claim 1 is not anticipated by the reference.

To more clearly define that fact that claim 1 specifies a QoS treatment that pertains to traffic of the network (and not traffic through a device such as device 30), claim 1 is amended to specify that the QoS treatment is “relative to flow inside said network.” As amended, claim 1 is even more clearly not anticipated by the reference.

It is noted that Fig. 8 is substantially the same as Fig. 1, with the major exception that there are two other LANs, 47 and 48, that are each connected to LAN 40 through a device 30. The arguments above apply to Fig. 8 as well.

Relative to claim 19, attention is respectfully directed to the last clause, which specifies that:

said characterization of said classes by said value ranges of one or more of said attributes is established through statistical analysis of a corpus of training traffic.

The Examiner points to Figs. 1, 2, and 8 and states that the measurement engine 140 samples data blows. That is correct, but that does not teach any use of “a corpus of training traffic” that is used for mapping attributed to classes. The notion of training traffic, as distinguished from actual traffic, is simply missing in the reference. Therefore, claim 19 is believed to include a limitation that additionally makes the claim not anticipated by the reference.

Duffield 2003-0207

Claim 20 specifies that “the statistical analysis that establishes said characterization identifies said value ranges that create groupings of said one or more of said attributes.” That is, the claim addresses attributes, values of an attribute, and ranges of those values. Thus, a method that picks, for example, the IP address attribute, and determines that IP addresses between value A and value B belong to class x1 and IP addresses between B and C belong to class x2 would be practicing what claim 20 specifies (if other limitations of the claim are met). The Examiner points to the passage at col. 8 [sic], line 66 to col. 9 line 5, which states:

In one embodiment, bandwidth management device 30 is configured to include traffic classes for known users, unknown users, and quarantined users. For example, traffic classification database 137 may include the following traffic classes 1)/inbound/knownusers/, 2)/inbound/quarantined/, 3)/inbound/unknownusers/, as well as traffic classes for outbound data flows (e.g., /outbound/knownusers/, etc.).

Respectfully, this does not teach classifications based on “value ranges” and, therefore, it is submitted that claim 20 is not anticipated by the reference.

Claim 22 specifies that the network of claim 1 is part of a larger network. This would comport with either LAN 40 being the target network, or network 50 being the target network, but with either choice the QoS treatment is NOT relative to the target network. The Examiner states that “Administrator interface 150 within bandwidth management device 30 and user management server 44 allows modification of network parameters,” citing col. 5, lines 34-48 and col. 10 [sic] lines 1-16.¹ Neither the col. 5 passage nor the col. 10 passage has the phrase “network parameters.” That, of course, is not surprising because device 30 does not control anything relative to either network 40 or network 50. It only controls the flow into device 30 (from either network 40 or network 50).

Regarding claim 23, the Examiner points to Fig. 8 and to text that points out that data flows from computer network 47 and 48 can be controlled. First, that does not address the limitation of claim 24 that deals with the fact that a corpus of training traffic

¹ The fact that the reference does not have 16 columns is pretty convincing that the Examiner inadvertently did not include the col. number. Most likely, the Examiner meant to cite col. 10, which in its first 16 lines discusses management server 44.

Duffield 2003-0207

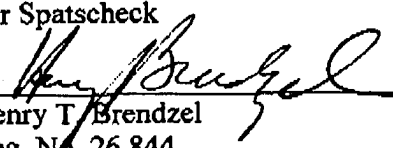
is used. It is noted that the term "corpus" in the phrase "corpus of training traffic" means a fixed amount of traffic, in contrast to a continuous stream of traffic. Second, whichever device 30 is focused on, it uses (a) continuous traffic (rather than a corpus of traffic), (b) the live traffic (in contrast to training traffic) that (b) solely flows through itself - and hence is not the traffic of other networks. It may be noted that claim 23 is amended to clarify that the traffic that constitutes the "training traffic" that is obtained from some network other than the target network is traffic of the network; not traffic that flows from the network. In other words, the term "from" might be misinterpreted, and the claim is amended to avoid this misinterpretation.

Regarding claim 26, the claim specifies three different steps of selecting (classes, applications, and traffic features). The Examiner points out that the reference teaches employing applications and other parameters to group traffic into classes but nowhere is there any step of selecting a set of classes, and selecting a set of applications, and selecting a set of traffic features. Also, claim 26 specifies a step of capturing traffic in a training network, but the reference does not do that. Rather, it samples passing traffic. Additionally, it does not limit itself to "traffic that belongs to applications that are included in the set." Further, and perhaps most importantly, it does not sample the traffic in and network. Rather, it samples the traffic passing through device 30, and does NOT account for any traffic that does not go through device 30.

In light of the above amendments and remarks, applicants respectfully submit that all of the Examiner's rejections have been overcome. Reconsideration and allowance are respectfully solicited.

Respectfully,
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